REMARKS/ARGUMENTS

In the specification, paragraphs [0024] through [0028] are amended.

Basis for the amendment of paragraphs [0024] - [0028] may be found in the specification in paragraphs [0043] - [0046] in which the gears have drawing designator numbers, and in Figs. 7, 10, 11, 12 and 14.

Claims 1 and 15 are amended. Claims 2-12 are canceled. Claims 13, 14, 16 and 17 are previously presented. New claims 18 - 20 are added.

Basis for the amendment of claim 1 may be found in the specification in [0040] and Fig. 1.

Basis for claim 18 may be found in the specification in [0041] and Fig. 1.

Basis for claim 19 may be found in the specification in [0032], [0040] and Fig. 1.

Basis for claim 20 may be found in the specification in [0040] and Fig. 1.

Claim 15 is objected to because "at the end should be changed to a - - .- -.

Amended claim 15 ends with the typographical error corrected by the "," changed to a - -.- -. It is requested that the objection be withdrawn.

Claims 1 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Addicks US 2,776,447 in view of Gregg US 2,890,480, that:

As to claim 1, Addicks discloses, a window balance comprising: a window frame, a window sash movably mounted in said window frame, a torsion spring 1 having a first end (near 11) and a second end (near 2), a spiral rod 12 within said torsion spring having a third end (near16) near the first end, a fourth end (near 2) near the second end, and a first axis through the third end and the fourth end, a threaded follower 6/11 mounted on said spiral rod for being rotated by said spiral rod when said follower is moved along said spiral rod between the third end and the fourth end of said spiral rod, said threaded follower being attached to the first end of said torsion spring for rotating the first end of said torsion spring by rotation of said follower, first means 2/3 for attaching the second end of said torsion spring to a window sash for axial movement of said torsion spring by the sash for moving said follower along said spiral rod by moving the sash, attached to said window sash, a mounting assembly 13/14, fixedly mounted on said window frame, attached to the third end of said spiral rod preventing axial movement of said spiral rod with respect to the window frame.

The difference between the claim and Addicks is the claim recited, a gear assembly comprising a first gear and a second gear, for rotating said spiral rod by said first gear when said first gear is driven by said second gear for changing base force in said torsion spring.

Gregg discloses a sash balance similar to that of Addicks. In addition, Gregg further teaches a gear assembly comprising first 4 and second 7 gears for rotating a spiral rod 21. It would have been obvious to one of ordinary skill in the art, having the disclosures of Addicks and Gregg before him at the time the invention was made, to modify the mounting assembly of Addicks to be a gear assembly, as in Gregg, to obtain a gear assembly that mounts the spiral rod to the frame. One would have been motivated to make such a combination because the ability to adjust the tension in the spring for the size and weight of the sash would have been achieved, as taught by Gregg (col.3. lines 40-70).

As to claim 14, Addicks discloses, further comprising: a tension spring 15 attached to said mounting assembly 13/14/16 and to said first means 2/3.

Gregg teaches that the mounting assembly is a gear assembly.

As to claim 15, Gregg teaches, further comprising: a keyed hole 8 in said second gear 7, an insert (tip of screwdriver) in said keyed hole, keyed to said hole so that insert rotates said second gear when said insert is rotated, means 6 for urging said insert from a first position (where 4 and 7 are engaged and 6 is compressed) on said gear to a second position (where 4 and 7 are disengaged and 6 is extended) on said second gear.

As to claim 16, Addicks discloses, a window balance comprising: a window frame, a window sash movably mounted in said window frame, a torsion spring having a first end and a second end, a spiral rod within said torsion spring having a third end near the first end, a fourth end near the second end, and a first axis through the third end and the fourth end, a threaded follower mounted on said spiral rod for being rotated by said spiral rod when said follower is moved along said spiral rod between the third end and the fourth end of said spiral rod, said threaded follower being attached to the first end of said torsion spring for rotating the first end of said torsion spring by rotation of said follower, first means for attaching the second end of said torsion spring to a window sash for axial movement of said torsion spring by the sash for moving said follower along said spiral rod by moving the sash, attached and said window sash.

Gregg teaches a first gear and a second gear mounted on a bearing frame 71 fixedly mounted on said window frame, said first gear attached to the third end of said spiral rod preventing axial movement of said spiral rod with respect to the window frame and for rotating sid spiral rod by said first gear when driven by said second gear for changing base force in said torsion spring.

As to claim 17, Gregg teaches, further comprising: a keyed hole 8 in said second gear, an insert (screwdriver bit) in said keyed hole, keyed to said hole so that insert rotates said second gear

when said insert is rotated, means 6 for urging said insert from a first position (4 and 7 engaged, with 6 compressed) on said second gear to a second position (4 and 7 disengaged, with 6 extended) on said second gear, means 10 on said bearing frame contacting said insert (contact through the second gear 7) for preventing rotation of said insert when said insert is in said second position.

Claim 13 is allowed.

The rejections are traversed.

Amended claim 1 is different from Addicks and Gregg.

In claim 1, the lower end of the spiral rod is not connected to the sash bracket so that the rod is not moved vertically by the bracket when the torsion spring is raised and lowered by the sash.

In each of Gregg and Addicks, the lower end is fixedly connected to the bracket so that the spiral rod moves vertically when the bracket is raised and lowered.

It is requested that the 35 U.S.C. 103 rejection of claim 1 be withdrawn.

New claim 18 is different from Addicks and Greg.

In claim 18, the nut (threaded follower) is attached to the torsion spring so that it moves up and down with the spring when the bracket is raised and lowered.

In Gregg tube 1 and the nut cannot move up and down with respect to the window frame. In Addicks the nut (slot 1) cannot move up and down with respect to the window frame.

New claim 19 is different from Addicks and Gregg

In claim 19, the gear prevents axial movement of the rod with respect to the window frame when the means for attaching is moved axially by the sash.

In each of Gregg and Addicks, the rod is moved axially with respect to the window frame when the bracket is moved axially by the sash.

New claim 20 is different from Addicks and Gregg.

As described in the subject application, at paragraph 0040, the lower end 126 of spiral rod 108 is removably received by recess 130 formed in block 86, but when the block is drawn down with the sash, away from screw 34, the unattached lower end 126 of the spiral rod 108 is left depending downward above the outside of recess 130.

By having a block 86 formed with a recess 130, the overall length of the window balance may be reduced, as the unattached fourth end of the spiral rod is received by the recess of block 86 which is fixedly attached to the second end of the torsion spring, as defined by new Claim 20.

The Addicks reference does not show this feature. Neither the connecting nipple 2, nor the filling member 7 of the Addicks spring balance includes a recess which received the unattached end of strip 12 (i.e., the spiral rod) as is clearly evident from Figures 1 and 3 of the Addicks patent. Similarly, in the Gregg et al. patent, no comparable block fixedly attached to the second end of the torsion spring is disclosed. The unattached end of the spiral rod 21 is not received by

a block or a recess formed in a block, as is clearly evident from Figure 2 of the Gregg et al. patent.

The remaining references of record which have not been applied against the pending claims also do not teach or suggest the particular feature of a block fixedly attached to the end of the torsion spring, where the block has formed therein a recess for removably receiving the unattached end of the spiral rod.

Accordingly, it is respectfully urged that new Claim 20 patentably distinguishes over the references of record and is allowable.

Claim 16 is different from Addicks and Gregg.

The invention features a spring-separated screw driver clutch (see Fig. 14) which goes to and operates the gears which are claimed in claim 16.

The examiner states that there is no gear in Addicks. In Gregg a screw driver turns a lower driver 7 which turns an upper driver 4 (column 2, line 20) The lower and upper drivers are both circular sections of 180 degree, spring-separated and registering against each other and overlapped to avoid disengagement when pushed together by a screw driver. Gregg's screw driver spring-separated clutch is different from a gear and serves a different purpose from a gear.

It is requested that the 35 U.S.C. 103 rejection of claim 16 be withdrawn.

In view of the above discussion and reasons, neither Addicks U.S. Patent No. 2,776,447, nor Gregg U.S. Patent No. 2,890,480 taken singly or in combination, disclose the present invention described in amended independent claims 1 and 15, dependent claims 14, 16, and 17, and new

claims 18, 19 and 20.

U.S. Patent No. 2,792,588, Gency has been reviewed and does not appear to add anything that would further contribute to making the invention as described in independent claims amended claim 1, 13, 16, and 18-20, obvious.

In view of the above amendments and discussion it is believed that the objection to claim 15 and the 35 U.S.C. 103(a) rejection of claims 1 and 14-17 is overcome. It is respectfully requested that the objection and rejection be withdrawn and that claims 1, and 13-20 be allowed.

A petition for extension of time and fee for three months extension accompanies this paper.

Respectfully submitted,

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Robert A. Seemann Date
Reg. No. 29,857

89 Earl Avenue, Hamden, CT 06514
Tel (203) 288-2122 Fax (203) 281-7313